CLAIMS:

1. A flat panel display apparatus comprising:

a faceplate;

a backplate disposed opposing said faceplate, said faceplate and said backplate adapted to be connected in a sealed environment such that a low pressure region exists between said faceplate and said backplate; and

a spacer assembly disposed within said sealed environment, said spacer assembly supporting said faceplate and said backplate against forces acting in a direction towards said sealed environment, said spacer assembly tailored to provide a secondary electron emission coefficient of approximately 1 for said spacer assembly when said spacer assembly is subjected to flat panel display operating voltages, said spacer assembly further including a spacer structure.

2. The flat panel display apparatus of Claim 1 wherein said spacer assembly further comprises:

a coating material applied to at least a portion of said spacer structure.

3. The flat panel display apparatus of Claim 2 wherein said spacer structure is selected from the group consisting of wall segments, posts, crosses, pins, T-shaped objects, spacer walls, and support structures.

4. The flat panel display apparatus of Claim 1 wherein said spacer structure is comprised of alumina doped with cerium oxide.

5. The flat panel display apparatus of Claim 2 wherein said coating material is comprised of a layered material.

6. The flat panel display apparatus of Claim 5 wherein said layered material is oriented with its basal plane parallel to a face of said spacer structure.

7. The flat panel display apparatus of Claim 5 wherein said layered material is a semimetal.

8. The flat panel display apparatus of Claim 5 wherein said layered material is selected from the group consisting of graphite, MoS_2, and $MoSe_2$.

9. The flat panel display apparatus of Claim 2 wherein said coating material is comprised of a metal oxide having the composition ABO_3, where A and B are transition metals.

10. The flat panel display apparatus of Claim 2 wherein said coating material is comprised of a metal oxide having the composition A_2BO_4, where A and B are transition metals.

11. The flat panel display apparatus of Claim 9 wherein said transitional metals A and B are mixed with alternating valence.

12. The flat panel display apparatus of Claim 11 wherein said coating material is comprised of $La_xBa_{(1-x)}TiO_3$.

13. The flat panel display apparatus of Claim 9 wherein said transitional metals A and B have the same valence and have different energy unoccupied states in the band gap.

14. The flat panel display apparatus of Claim 13 wherein said coating material is comprised of $SrTi_xZr_{(1-x)}O_3$.

15. The flat panel display apparatus of Claim 9 wherein said transitional metals A and B are atoms of different size and are mixed on the same lattice site.

16. The flat panel display apparatus of Claim 15 wherein said coating material is comprised of $La_xY_{(1-x)}CrO_3$.

17. The flat panel display apparatus of Claim 2 wherein said coating material is comprised of boron nitride.

18. The flat panel display apparatus of Claim 2 wherein said coating material is comprised of a combination of boron nitride and carbon.

19. The flat panel display apparatus of Claim 17 wherein said boron nitride is deposited to a thickness of greater than approximately 15 Angstroms.

20. The flat panel display apparatus of Claim 18 wherein said combination of boron nitride and carbon is deposited to a thickness of greater than approximately 15 Angstroms.

21. The flat panel display apparatus of Claim 2 wherein said coating material is comprised of at least one material selected from the group consisting of: borides, carbides, and nitrides.

22. The flat panel display apparatus of Claim 1 wherein said spacer structure is comprised of at least one material selected from the group consisting of: borides, carbides, and nitrides.

23. The flat panel display apparatus of Claim 2 wherein said coating material is comprised of an oxygen releasing material.

24. The flat panel display apparatus of Claim 23 wherein said oxygen releasing material is an oxidizer.

25. The flat panel display apparatus of Claim 23 wherein said coating material is selected from the group consisting of: perchlorates, peroxides, and nitrates.

26. The flat panel display apparatus of Claim 23 wherein said coating material is comprised of $KClO_4$.

27. The flat panel display apparatus of Claim 1 wherein said spacer structure is comprised of an oxygen releasing material.

28. The flat panel display apparatus of Claim 27 wherein said oxygen releasing material is an oxidizer.

29. The flat panel display apparatus of Claim 27 wherein said spacer structure is comprised of a material selected from the group consisting of: perchlorates, peroxides, and nitrates.

30. The flat panel display apparatus of Claim 27 wherein said spacer structure is comprised of $KClO_4$.

31. The flat panel display apparatus of Claim 2 wherein said coating material is comprised of insulated metal-containing particles.

32. The flat panel display apparatus of Claim 31 wherein said insulated metal-containing particles are comprised of a core of metal material at least partially encapsulated by an insulating shell.

33. The flat panel display apparatus of Claim 32 wherein said insulating shell has sufficient thickness such that, at low incident electron energies, electrons will not penetrate said insulating shell.

34. The flat panel display apparatus of Claim 32 wherein said insulating shell has sufficient thickness such that, at high incident electron energies, electrons will penetrate said insulating shell.

35. The flat panel display apparatus of Claim 32 wherein said insulating shell has a thickness of approximately 20-200 Angstroms.

36. The flat panel display apparatus of Claim 32 wherein said core of metal material has a diameter of approximately 1,000-10,000 Angstroms.

37. The flat panel display apparatus of Claim 32 wherein said core of metal material is formed of material selected from the group consisting of: Si, Al, Ti, Cr, Zr, La, Ce, Pr, Nd, Pm, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, and Lu.

38. The flat panel display apparatus of Claim 32 wherein said insulating shell is comprised of oxygen reacted with material selected from the group consisting of: Si, Al, Ti, Cr, Zr, La, Ce, Pr, Nd, Pm, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, and Lu.

39. The flat panel display apparatus of Claim 32 wherein said insulating shell is comprised of nitrogen reacted with material selected from the group consisting of: Si, Al, Ti, Cr, Zr, La, Ce, Pr, Nd, Pm, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, and Lu.

40. The flat panel display apparatus of Claim 2 wherein said coating material is comprised of metal material impregnated into a porous matrix.

41. The flat panel display apparatus of Claim 40 wherein said metal material impregnated into a porous matrix is comprised of a zeolite structure.

42. The flat panel display apparatus of Claim 31 wherein said insulated metal-containing particles are dip-coated onto said spacer structure.

43. The flat panel display apparatus of Claim 31 wherein said insulated metal-containing particles are spray-coated onto said spacer structure.

44. The flat panel display apparatus of Claim 31 wherein said insulated metal-containing particles are suspended in a colloidal solution during application to said spacer structure.

45. The flat panel display apparatus of Claim 31 wherein said insulated metal-containing particles are applied to said spacer structure such that said insulated metal-containing particles are substantially separated from each other.

46. The flat panel display apparatus of Claim 40 wherein said metal material impregnated into said porous matrix is dip-coated onto said spacer structure.

47. The flat panel display apparatus of Claim 40 wherein said metal material impregnated into said porous matrix is spray-coated onto said spacer structure.

48. The flat panel display apparatus of Claim 40 wherein said metal material impregnated into said porous matrix is suspended in a colloidal solution during application to said spacer structure.

49. The flat panel display apparatus of Claim 40 wherein said metal material impregnated into said porous matrix is applied to said spacer structure such that adjacent particles of said metal material impregnated into said porous matrix are substantially separated from each other.

50. The flat panel display apparatus of Claim 2 wherein said coating material is comprised of CeO_2 doped with lanthanide ions such that resistivity of said coating material is stabilized against variations in oxygen-related parameters occurring during operation of said flat panel display apparatus.

51. The flat panel display apparatus of Claim 2 wherein said coating material is comprised of CeO_2 doped with Cr ions such that resistivity of said coating material

is stabilized against variations in oxygen-related parameters occurring during operation of said flat panel display apparatus.

52. The flat panel display apparatus of Claim 2 wherein said coating material is comprised of CeO_2 doped with Ni ions such that resistivity of said coating material is stabilized against variations in oxygen-related parameters occurring during operation of said flat panel display apparatus.

53. The flat panel display apparatus of Claim 1 wherein said spacer structure is formed of a material which is chosen using a selection process which considers the ΔG of the material comprising the spacer structure.

54. The flat panel display apparatus of Claim 2 wherein said coating material is formed of a material which is chosen using a selection process which considers the ΔG of the coating material.

55. The flat panel display apparatus of Claim 2 wherein said coating material is comprised of a layer of TiN which was deposited onto and annealed to a layer of boron nitride.

56. The flat panel display apparatus of Claim 55 wherein said layer of TiN was deposited to a thickness of approximately 10-300 Angstroms onto said layer of boron nitride.

57. The flat panel display apparatus of Claim 55 wherein said layer of boron nitride, onto which said layer of TiN was deposited, has a thickness of approximately 50-2000 Angstroms.

58. The flat panel display apparatus of Claim 55 wherein said layer of TiN was deposited onto said layer of boron nitride in the presence of N_2.

59. The flat panel display apparatus of Claim 58 wherein said layer of TiN was deposited onto said layer of boron nitride in the presence of said N_2 at a partial pressure of approximately 20-100 milliTorr.

60. The flat panel display apparatus of Claim 55 wherein said layer of TiN and boron nitride is annealed at a temperature of approximately 500-900 degrees Celsius.

61. The flat panel display apparatus of Claim 60 wherein said layer of TiN and boron nitride is annealed at a temperature of approximately 500-900 degrees Celsius in an N_2 atmosphere.

62. The flat panel display apparatus of Claim 2 wherein said coating material is comprised of a layer of TiAl which was deposited onto and annealed to a layer of boron nitride.

63. The flat panel display apparatus of Claim 62 wherein said layer of TiAl was deposited to a thickness of approximately 10-300 Angstroms onto said layer of boron nitride.

64. The flat panel display apparatus of Claim 62 wherein said layer of boron nitride, onto which said layer of TiN was deposited, has a thickness of approximately 50-2000 Angstroms.

65. The flat panel display apparatus of Claim 62 wherein said layer of TiAl was deposited onto said layer of boron nitride in the presence of N_2.

66. The flat panel display apparatus of Claim 65 wherein said layer of TiAl was deposited onto said layer of boron nitride in the presence of said N_2 at a partial pressure of approximately 20-100 milliTorr.

67. The flat panel display apparatus of Claim 62 wherein said layer of TiAl and boron nitride is annealed at a temperature of approximately 500-900 degrees Celsius.

68. The flat panel display apparatus of Claim 67 wherein said layer of TiAl and boron nitride is annealed at a temperature of approximately 500-900 degrees Celsius in an N_2 atmosphere.

69. The flat panel display apparatus of Claim 2 wherein said coating material is comprised of a layer of TiN overlying a layer of boron nitride.

70. The flat panel display apparatus of Claim 69 wherein said layer of TiN has a thickness of approximately 10-300 Angstroms.

71. The flat panel display apparatus of Claim 69 wherein said layer of boron nitride has a thickness of approximately 50-2000 Angstroms.

72. The flat panel display apparatus of Claim 2 wherein said coating material is comprised of a layer of TiAl overlying a layer of boron nitride.

73. The flat panel display apparatus of Claim 72 wherein said layer of TiAl has a thickness of approximately 10-300 Angstroms.

74. The flat panel display apparatus of Claim 72 wherein said layer of boron nitride has a thickness of approximately 50-2000 Angstroms.

75. The flat panel display apparatus of Claim 2 wherein said spacer structure is comprised of ceramic boron nitride.

76. The flat panel display apparatus of Claim 75 wherein said coating material is comprised of a layer of TiN which has been deposited onto and annealed with said ceramic boron nitride spacer structure.

77. The flat panel display apparatus of Claim 76 wherein said layer of TiN was deposited to a thickness of approximately 10-300 Angstroms onto said ceramic boron nitride spacer structure.

78. The flat panel display apparatus of Claim 2 wherein said coating material is comprised of Nd_2O_3.

79. The flat panel display apparatus of Claim 2 wherein said coating material is comprised of a material selected from the group consisting of: Cr_2O_3-Nd_2O_3, Nd_2O_3-MnO, and Cr_2O_3-MnO.

80. The flat panel display apparatus of Claim 2 wherein said coating material is comprised of a metal sulfide.

81. The flat panel display apparatus of Claim 80 wherein said metal sulfide is selected from the group consisting of: MoS_2 and WS_2.

82. The flat panel display apparatus of Claim 80 wherein said metal sulfide is formed by reacting an oxide coating with a mixture of H_2S and H_2.

83. The flat panel display apparatus of Claim 2 wherein said coating material is formed of a first layer of material and a second layer of material wherein said first layer of material and said second layer of material have different electron densities.

84. The flat panel display apparatus of Claim 2 wherein said coating material is formed of a first layer of comprised of Cr_2O_3 and a second layer comprised of Nd_2O_3.

85. The flat panel display apparatus of Claim 84 wherein said first layer comprised of Cr_2O_3 has thickness of approximately 30 Angstroms.

86. The flat panel display apparatus of Claim 84 wherein said second layer comprised of Nd_2O_3 has thickness of approximately 100 Angstroms.

87. A spacer assembly for use in a field emission display device, said spacer assembly adapted to support a faceplate and a backplate against forces acting in a direction towards each other, said spacer assembly tailored to provide a secondary electron emission coefficient of approximately 1 for said spacer assembly when said spacer assembly is subjected to flat panel display operating voltages, said spacer assembly further including a spacer structure.

88. The spacer assembly of Claim 87 wherein said spacer assembly further comprises:

a coating material applied to at least a portion of said spacer structure.

89. The spacer assembly of Claim 88 wherein said spacer structure is selected from the group consisting of wall segments, posts, crosses, pins, T-shaped objects, spacer walls, and support structures.

90. The spacer assembly of Claim 87 wherein said spacer structure is comprised of alumina doped with cerium oxide.

91. The spacer assembly of Claim 88 wherein said coating material is comprised of a layered material.

92. The spacer assembly of Claim 91 wherein said layered material is oriented with its basal plane parallel to a face of said spacer structure.

93. The spacer assembly of Claim 91 wherein said layered material is a semimetal.

94. The spacer assembly of Claim 91 wherein said layered material is selected from the group consisting of graphite, MoS_2, and $MoSe_2$.

95. The spacer assembly of Claim 88 wherein said coating material is comprised of a metal oxide having the composition ABO_3, where A and B are transition metals.

96. The spacer assembly of Claim 88 wherein said coating material is comprised of a metal oxide having the composition A_2BO_4, where A and B are transition metals.

97. The spacer assembly of Claim 95 wherein said transitional metals A and B are mixed with alternating valence.

98. The spacer assembly of Claim 97 wherein said coating material is comprised of $La_xBa_{(1-x)}TiO_3$.

99. The spacer assembly of Claim 95 wherein said transitional metals A and B have the same valence and have different energy unoccupied states in the band gap.

100. The spacer assembly of Claim 99 wherein said coating material is comprised of $SrTi_xZr_{(1-x)}O_3$.

101. The spacer assembly of Claim 95 wherein said transitional metals A and B are atoms of different size and are mixed on the same lattice site.

102. The spacer assembly of Claim 101 wherein said coating material is comprised of $La_xY_{(1-x)}CrO_3$.

103. The spacer assembly of Claim 88 wherein said coating material is comprised of boron nitride.

104. The spacer assembly of Claim 88 wherein said coating material is comprised of a combination of boron nitride and carbon.

105. The spacer assembly of Claim 103 wherein said boron nitride is deposited to a thickness of greater than approximately 15 Angstroms.

106. The spacer assembly of Claim 104 wherein said combination of boron nitride and carbon is deposited to a thickness of greater than approximately 15 Angstroms.

107. The spacer assembly of Claim 88 wherein said coating material is comprised of at least one material selected from the group consisting of: borides, carbides, and nitrides.

108. The spacer assembly of Claim 87 wherein said spacer structure is comprised of at least one material selected from the group consisting of: borides, carbides, and nitrides.

109. The spacer assembly of Claim 88 wherein said coating material is comprised of an oxygen releasing material.

110. The spacer assembly of Claim 109 wherein said oxygen releasing material is an oxidizer.

111. The spacer assembly of Claim 109 wherein said coating material is selected from the group consisting of: perchlorates, peroxides, and nitrates.

112. The spacer assembly of Claim 109 wherein said coating material is comprised of $KClO_4$.

113. The spacer assembly of Claim 87 wherein said spacer structure is comprised of an oxygen releasing material.

114. The spacer assembly of Claim 113 wherein said oxygen releasing material is an oxidizer.

115. The spacer assembly of Claim 113 wherein said spacer structure is comprised of a material selected from the group consisting of: perchlorates, peroxides, and nitrates.

116. The spacer assembly of Claim 113 wherein said spacer structure is comprised of $KClO_4$.

117. The spacer assembly of Claim 88 wherein said coating material is comprised of insulated metal-containing particles.

118. The spacer assembly of Claim 117 wherein said insulated metal-containing particles are comprised of a core of metal material at least partially encapsulated by an insulating shell.

119. The spacer assembly of Claim 118 wherein said insulating shell has sufficient thickness such that, at low flat panel display operating voltages, electrons will not penetrate said insulating shell.

120. The spacer assembly of Claim 118 wherein said insulating shell has sufficient thickness such that, at high flat panel display operating voltages, electrons will penetrate said insulating shell.

121. The spacer assembly of Claim 118 wherein said insulating shell has a thickness of approximately 20-200 Angstroms.

122. The spacer assembly of Claim 118 wherein said core of metal material has a diameter of approximately 1,000-10,000 Angstroms.

123. The spacer assembly of Claim 118 wherein said core of metal material is formed of material selected from the group consisting of: Si, Al, Ti, Cr, Zr, La, Ce, Pr, Nd, Pm, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, and Lu.

124. The spacer assembly of Claim 118 wherein said insulating shell is comprised of oxygen reacted with material selected from the group consisting of: Si, Al, Ti, Cr, Zr, La, Ce, Pr, Nd, Pm, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, and Lu.

125. The spacer assembly of Claim 118 wherein said insulating shell is comprised of nitrogen reacted with material selected from the group consisting of: Si, Al, Ti, Cr, Zr, La, Ce, Pr, Nd, Pm, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb, and Lu.

126. The spacer assembly of Claim 88 wherein said coating material is comprised of metal material impregnated into a porous matrix.

127. The spacer assembly of Claim 126 wherein said metal material impregnated into a porous matrix is comprised of a zeolite structure.

128. The spacer assembly of Claim 117 wherein said insulated metal-containing particles are dip-coated onto said spacer structure.

129. The spacer assembly of Claim 117 wherein said insulated metal-containing particles are spray-coated onto said spacer structure.

130. The spacer assembly of Claim 117 wherein said insulated metal-containing particles are suspended in a colloidal solution during application to said spacer structure.

131. The spacer assembly of Claim 117 wherein said insulated metal-containing particles are applied to said spacer structure such that said insulated metal-containing particles are substantially separated from each other.

132. The spacer assembly of Claim 126 wherein said metal material impregnated into said porous matrix is dip-coated onto said spacer structure.

133. The spacer assembly of Claim 126 wherein said metal material impregnated into said porous matrix is spray-coated onto said spacer structure.

134. The spacer assembly of Claim 126 wherein said metal material impregnated into said porous matrix is suspended in a colloidal solution during application to said spacer structure.

135. The spacer assembly of Claim 126 wherein said metal material impregnated into said porous matrix is applied to said spacer structure such that

adjacent particles of said metal material impregnated into said porous matrix are substantially separated from each other.

136. The spacer assembly of Claim 88 wherein said coating material is comprised of CeO_2 doped with lanthanide ions such that resistivity of said coating material is stabilized against variations in oxygen-related parameters occurring during operation of said flat panel display apparatus.

137. The spacer assembly of Claim 88 wherein said coating material is comprised of CeO_2 doped with Cr ions such that resistivity of said coating material is stabilized against variations in oxygen-related parameters occurring during operation of said flat panel display apparatus.

138. The spacer assembly of Claim 88 wherein said coating material is comprised of CeO_2 doped with Ni ions such that resistivity of said coating material is stabilized against variations in oxygen-related parameters occurring during operation of said flat panel display apparatus.

139. The spacer assembly of Claim 87 wherein said spacer structure is formed of a material which is chosen using a selection process which considers the ΔG of the material comprising the spacer structure.

140. The spacer assembly of Claim 88 wherein said coating material is formed of a material which is chosen using a selection process which considers the ΔG of the coating material.

141. The spacer assembly of Claim 88 wherein said coating material is comprised of a layer of TiN which was deposited onto and annealed to a layer of boron nitride.

142. The spacer assembly of Claim 141 wherein said layer of TiN was deposited to a thickness of approximately 10-300 Angstroms onto said layer of boron nitride.

143. The spacer assembly of Claim 141 wherein said layer of boron nitride, onto which said layer of TiN was deposited, has a thickness of approximately 50-2000 Angstroms.

144. The spacer assembly of Claim 141 wherein said layer of TiN was deposited onto said layer of boron nitride in the presence of N_2.

145. The spacer assembly of Claim 144 wherein said layer of TiN was deposited onto said layer of boron nitride in the presence of said N_2 at a partial pressure of approximately 20-100 milliTorr.

146. The spacer assembly of Claim 141 wherein said layer of TiN and boron nitride is annealed at a temperature of approximately 500-900 degrees Celsius.

147. The spacer assembly of Claim 146 wherein said layer of TiN and boron nitride is annealed at a temperature of approximately 500-900 degrees Celsius in an N_2 atmosphere.

148. The spacer assembly of Claim 88 wherein said coating material is comprised of a layer of TiAl which was deposited onto and annealed to a layer of boron nitride.

149. The spacer assembly of Claim 148 wherein said layer of TiAl was deposited to a thickness of approximately 10-300 Angstroms onto said layer of boron nitride.

150. The spacer assembly of Claim 148 wherein said layer of boron nitride, onto which said layer of TiN was deposited, has a thickness of approximately 50-2000 Angstroms.

151. The spacer assembly of Claim 148 wherein said layer of TiAl was deposited onto said layer of boron nitride in the presence of N_2.

152. The spacer assembly of Claim 151 wherein said layer of TiAl was deposited onto said layer of boron nitride in the presence of said N_2 at a partial pressure of approximately 20-100 milliTorr.

153. The spacer assembly of Claim 148 wherein said layer of TiAl and boron nitride is annealed at a temperature of approximately 500-900 degrees Celsius.

154. The spacer assembly of Claim 153 wherein said layer of TiAl and boron nitride is annealed at a temperature of approximately 500-900 degrees Celsius in an N_2 atmosphere.

155. The spacer assembly of Claim 88 wherein said coating material is comprised of a layer of TiN overlying a layer of boron nitride.

156. The spacer assembly of Claim 155 wherein said layer of TiN has a thickness of approximately 10-300 Angstroms.

157. The spacer assembly of Claim 155 wherein said layer of boron nitride has a thickness of approximately 50-2000 Angstroms.

158. The spacer assembly of Claim 88 wherein said coating material is comprised of a layer of TiAl overlying a layer of boron nitride.

159. The spacer assembly of Claim 158 wherein said layer of TiAl has a thickness of approximately 10-300 Angstroms.

160. The spacer assembly of Claim 158 wherein said layer of boron nitride has a thickness of approximately 50-2000 Angstroms.

161. The spacer assembly of Claim 88 wherein said spacer structure is comprised of ceramic boron nitride.

162. The spacer assembly of Claim 161 wherein said coating material is comprised of a layer of TiN which has been deposited onto and annealed with said ceramic boron nitride spacer structure.

163. The spacer assembly of Claim 162 wherein said layer of TiN was deposited to a thickness of approximately 10-300 Angstroms onto said ceramic boron nitride spacer structure.

164. The spacer assembly of Claim 88 wherein said coating material is comprised of Nd_2O_3.

165. The spacer assembly of Claim 88 wherein said coating material is comprised of a material selected from the group consisting of: Cr_2O_3-Nd_2O_3, Nd_2O_3-MnO, and Cr_2O_3-MnO.

166. The spacer assembly of Claim 88 wherein said coating material is comprised of a metal sulfide.

167. The spacer assembly of Claim 166 wherein said metal sulfide is selected from the group consisting of: MoS_2 and WS_2.

168. The spacer assembly of Claim 166 wherein said metal sulfide is formed by reacting an oxide coating with a mixture of H_2S and H_2.

169. The spacer assembly of Claim 88 wherein said coating material is formed of a first layer of material and a second layer of material wherein said first layer of material and said second layer of material have different electron densities.

170. The spacer assembly of Claim 88 wherein said coating material is formed of a first layer of comprised of Cr_2O_3 and a second layer comprised of Nd_2O_3.

171. The spacer assembly of Claim 170 wherein said first layer comprised of Cr_2O_3 has thickness of approximately 30 Angstroms.

172. The spacer assembly of Claim 170 wherein said second layer comprised of Nd_2O_3 has thickness of approximately 100 Angstroms.